

## II. Remarks

### A. Status of the Claims

Claims 1-7 and 10-21 are pending in this application.

New independent claim 20 incorporates the subject matter of originally filed claim 8 and base claim 1, because the Examiner previously held claim 8 as allowable if rewritten in independent form incorporating all the limitations of the base claim 1. New claim 21 incorporates the subject matter of originally filed claim 9, which was dependent on claim 8. Claims 8 and 9 have been cancelled.

Claims 1-7 and 9-19 are rejected. Applicants acknowledge the Advisory Action dated July 2, 2007.

### B. 35 U.S.C. §103 Rejection

Claims 1-7 and 9-19 are rejected as allegedly unpatentable under 35 U.S.C. §103 by European Patent No. EP 1,068,901 (hereinafter, "Deguchi") in view of U.S. Patent No. 6,482,304 (hereinafter "Emery").

The Patent and Trademark Office (PTO) bears the burden of initially establishing a prima facie case of obviousness. MPEP § 2142. MPEP § 2143 provides the standard required to establish a prima facie case of obviousness. "First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine what the reference teaches. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references combined) must teach or suggest all the claim limitations." The Supreme Court has recently instructed that the analysis of an obviousness finding must be made explicitly part of the record. *KSR International Co. v. Teleflex Inc.* (2007) (Slip Op. at page 4). Applicants respectfully contend that the Office has not met its burden in this case.

According to the Office Action, Deguchi discloses an electrodeionization device providing a first and second flow path comprising a plurality of alternating depletion and concentration compartments each compartment having a plurality of ion concentration channels capable of allowing the migration of ions into the fluid passing therethrough when a current is generated between said anode and cathode assemblies. The Office Action, believes that each depletion compartment is configured such that fluid brought thereinto flows in to each ion concentration channel substantially sequentially. The Office Action, admits that Deguchi fails to disclose the use of conduits to connect deionization channels, but alleges that Emery discloses that conduits are routinely used to connect deionization channels in an electrodeionization unit. Applicants respectfully traverse the rejection.

Applicants respectfully contend that the conduits allegedly disclosed in Emery would not be successful if used in conjunction with the deionization cells of Deguchi because Deguchi suggests that the lateral flow of water is needed to improve contact efficiency. Deguchi states:

The electrodeionization apparatus of the present invention has desalting compartments, each of which is divided into a plurality of cells by a partition member, and an ion exchanger is filled in the respective cells. At least a part of the partition member facing the cell is inclined relative to a normal flow direction of the water in the desalting compartment. . . . Therefore at least a part of the water flowing into the desalting compartment should flow obliquely relative to the normal flow direction of water so that the water is dispersed overall the desalting compartment (Deguchi page 2, paragraph [0012]. (See also paragraph [0036])).

If conduits were provided at the bottom of each of Deguchi's cells (which would always be the case except for the bottom row of cells) the lateral flow of the water would be lost and thus the efficiency suggested by Deguchi (paragraph [009]) would be lost. Accordingly, Applicants respectfully submit using conduits in the Deguchi apparatus would not be successful and thus the suggested combination is not prima facie obvious. Withdrawal of the rejection is respectfully requested.

Turning to claim 16, Applicants note that claim 16 recites, in part "the average size of the resin beads in the concentration compartments being substantially smaller than the average size of resin beds in the depletion compartments." Applicants respectfully contend that Deguchi does not disclose this element. Applicants previously requested that the Office point out specifically where Deguchi discloses that the average size of the resin beads in the concentration compartments are substantially smaller than the average size of resin beds in the depletion compartments. To date the Office has not pointed to any passage in Deguchi that discloses this element. Moreover, Emery does nothing to cure this defect. Applicants respectfully request withdrawal of the rejection of claim 16 and its dependencies.

III. CONCLUSION

In view of the foregoing remarks, Applicants respectfully request the reconsideration and withdrawal of the rejections. It is believed that all claims are now in condition for allowance.

Applicants believe that the above response is a complete response to the present Office Action action. An early and favorable action on the merits is earnestly solicited. If however the Examiner believes that some requirement has been missed or not completely answered, or if he believes that a telephonic interview will advance the prosecution of this application, the Examiner is invited to contact the undersigned at the telephone number provided below

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account

Respectfully submitted,



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